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Prospect of Premier Port Competition in East Asian Region *

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Contents

Abstract

Since early 2000s, China's major ports developed port facilities rapidly. Within a very short period, China succeeded to construct independent port system which does not rely on the nearby countries ports. To the contrary, neighboring countries' major ports with China confronted new challenge due to the Chinese progressive ports policy. Various measures are being introduced and practiced to cope with the challenge. However, the future prospect of the neighboring countries' major ports with China is not bright. In this paper, the anticipated prospect of the competition between Chinese ports and neighboring countries' major ports is to be suggested.

For the appraisal criteria on the prospect toward Premier Port status, four elements, which are composed of geographical advantages, scale of container volumes, cost advantage, and national port policy, were selected, and used. As the result of the assessment, the port of Shanghai was evaluated as holding the highest probability toward Premier Port rather than any other East Asian major ports. Finally, it was recommended that the neighboring countries major ports with China which are confronted with the challenge from the Chinese ports, would be better to transform their strategies from current competition and quantity oriented policy to cooperation and value oriented policy.

Key words : Premier Port, Premier Port Competition, Chinese Port Policy, Major Ports in East Asian Region, Hub Port Competition

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I. Introduction

The positions of East Asian major ports are changing rapidly. The East Asian region can be divided into several sub-regions. The three major sub-regions are distinguished. The first is Northeast sub-region, covering Korea, North China and Japan. The second is Southern sub-region, where Hong Kong, Shenzhen, Guangzhou and the Pearl River Delta are included. The Middle sub-region as the third includes Shanghai, Yangtze River areas, and Taiwan. Every port in each sub-region has a goal toward the construction of Hub Port. Until now, the port of Busan in Northeast, Hong Kong in Southern, and Kaohsiung & Shanghai in Middle succeeded in the establishment of hub status in each sub-region.

However, considerable change is occurring in these hub positions. Since the late 2000s, the port of Qindao in the Northeast sub-region chases Busan. In the Southern sub-region, the port of Shenzhen and Guangzhou are challenging Hong Kong. In the Middle sub-region, Shanghai is strengthening the dominant position more strongly. Accordingly, the above major ports are all trying to be Hub in each sub-region. Furthermore, each port is trying to secure Premier Port status beyond Hub position, unrivaled in East Asia. Inter-port competition toward the construction of the Premier status is very fierce. This became a major subject of interests from maritime, port, and logistics industries.

The port, if it lost the competitive advantage in the Premier Port competition, would impact serious blow for the local and national economy as well as loss of its international position. Accordingly, each port's commitment to strengthen its position toward Premier status as well as preventing the loss of hub function in each sub-region will be more intensified in the future than before. Moderate competition is needed for the competing ports to strengthen their competitiveness. However, excessive competition would be harmful for the both of the competing ports in the aspect of utilization of resources and cooperative environment which is now being formulated in these areas, for example, the creation of FTA. Therefore, excessive competition has to

be coordinated and avoided as soon as possible. However, the coordination between the internationally competing ports like Chinese ports and neighboring countries' ports is not easy as expected.

In this study, recent Chinese progressive ports policy to become the Premier Port is to be reviewed. At the same time the impact of Chinese ports policy to the nearby countries' major ports is to be analyzed. And the reaction from the nearby countries' major port toward Premier Port is also to be analyzed. Finally the anticipated prospect of the Premier Port competition between Chinese ports and neighboring countries' ports is to be prospected, and the strategy to be pursued by them is to be suggested.

II. Literature Review of Premier Port

There are some researches on the international port competition. However, the scope of these researches is, generally, limited within a specific area. For example, competition between the ports of Hong Kong and Southern China, between the ports of Northeast region, between the ports of Yangtze River area, comprises the mainstream. Under this context, Lau has compared the competitiveness of only the port of Hong Kong and Shenzhen.[1)] Similarly, Jiang and Li measured only the performance of the Northeast Asian ports.[2)]

However, researches on the competitive relationship of the entire East Asian ports beyond sub-region are not so much as expected. In this tendency, Yeo compared the competitiveness of the entire Asian ports.[3)] However, Yeo's interest was not in the relationship of the port competition, rather focused on the quantitative competitiveness of each port. However, Yap and Lam concentrated the competitive dynamics between the major ports in East Asia. They pointed out very important point that inter-port competition in this region would intensify in the future as the centre of gravity of cargo volume shifts to mainland China.[4)] However, they did not analyze the strategies of

1) Lau(2008).
2) Jiang and Li(2009).
3) Yeo(2010).
4) Yap and Lam(2006), p.45.

each port, and thus recommend any measures for them to cope with the anticipated results of the intensifying competition.

Recently, there are some researches on the port cooperation as well as port competition. Hoshino focused on the cooperative relationship between the port of Tokyo and Yokohama, Osaka and Kobe.[5] Through the analysis, he stressed that integration of the ports should be implemented for the strength of the competitiveness and construction of the efficient cooperative relationship. According to Li and Oh, the port of Shanghai and Ningbo-Zhoushan is in a very intensive competition. To overcome this problem, they recommended that cooperative relationship need to be constructed for the healthy growth of the two ports.[6] Choi, Park and Park presented a model for the cooperation between the port of Northeast Asia.[7] Song depicted, interestingly, that the port of Hong Kong and Shenzhen keeps basically competitive and cooperative relationship.[8] Wang also asserted that southern Chinese ports including tHong Kong and Yantian located in the Pearl River Delta should be developed as twin-port load center.[9] Like these, the above researches have some useful meanings from the perspective of the construction of the competitive and cooperative relationship in a specific area.

However, almost all of the above researches were not approached from the entire East Asian region's perspective. They were analyzed from only the sub-region's point of view. But, currently port environment within the East Asian region changes rapidly. Especially, the emergence of one large East Asian is conspicuous rather than ever. With the change, the scope of the port competition is being expanded from sub-region to region basis. This new change need to be approached differently from the past point of view. Concept of Premier Port competition is indispensible to analyze this environmental change.

Then, it is necessary, in here, to define the concept of 'Premier Port' more concretely. However, the concept of 'Premier Port' is not clear yet. This is extremely new concept. Thus, any clear definition is necessary. Then, how can

5) Hoshino(2010).
6) Li and Oh(2010).
7) Choi et al.(2004).
8) Song(2003).
9) Wang(1998), p.200.

we approach this concept?

Conceptually, Premier Port is, basically, thought to be related with the 'area' concept. Based on the functional and geographical features, ports can be generally divided into Hub and Feeder. Hub has, essentially, a number of Feeders. Hub has useful meaning only in relationship with Feeder. If there are no feeder ports around the Hub, it can not be called as Hub port. The Port of Singapore, for example, today, developed to Hub port, because it has many feeder ports around Singapore. Like this, Hub & Feeder relationships can be formulated only in a certain spatial extent. The port of Singapore, for example, acts as a hub in South-East Asia, but not as a hub in Northeast Asia. Therefore, the port of Singapore, can't replace the function of Busan. Consequently, both the port of Singapore and Busan function as separate Hub ports in separate sub-regions. Hub & Feeder relationship, like this, does not effective in outside of the specific area.

Currently, East Asian region can be divided into three sub-regions which will be described in the next. Each sub-region has its own Hub & Feeder system. The port of Busan, Kaohsiung, and Hong Kong were respectively acted as Hub in each sub-region until recently. But from the early 2000s, Hub ports structure has been changed gradually. Today, in the Northeast, Qingdao, Tianjin, and Dalian are trying to replace the port of Busan. The port of Shanghai in the Middle sub-region has already replaced the port of Kaohsiung. In Southern district, the port of Shenzhen and Guangzhou has now acquired similar strength with the port of Hong Kong.

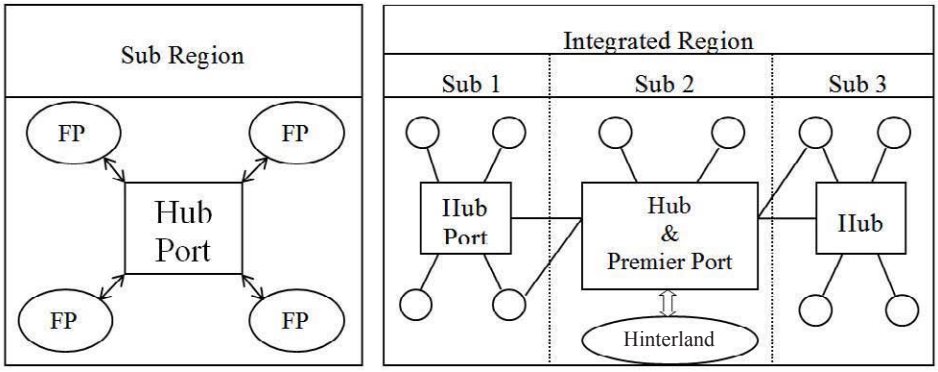
In addition to the above changes, another new stream is also being formulated. It is a collapse of the barrier between the three sub-regions, and integration of one large East Asian region. The emergence of the East Asian region is due to the following several factors. First is the high frequency of liner services within the region. Second is increased trade within the region. Third is the increase of liner services by large container vessels through the active expansion of port facilities within the region. As a result of these new changes, today, East Asia's three sub-regions are moving to be integrated to one big East Asian region.

The above environmental change, however, inevitably affects each port's position in this region. For example, the port of Shanghai which has not attracted the Japanese and Northern Chinese cargoes in the past, became to attract these cargoes. This means that, both the port of Busan and Shanghai are now in a competitive relationship with each other in the aspect of the attraction of Japanese and Northern Chinese cargoes. Similarly, Hong Kong which was acted as Hub for the Shenzhen and Guangzhou areas for long times, became to be entered into a competitive relationship with Busan and Shanghai since 2000s. Today, some Japanese and Northern Chinese cargoes for Europe are handled in the port of Hong Kong. Furthermore, this tendency can be found in the port of Shenzhen and Guangzhou. Namely, Southern Chinese ports of Shenzhen and Guangzhou are also attracting the Japanese cargoes to European Route. In this aspect, it can be said that both the ports of Hong Kong, Shenzhen and Guangzhou are, all together, competing with the ports of Shanghai and Busan for the attraction of Japanese cargoes. As a result of these structural changes, mega ports in East Asian region are, placed under the same competitive environment.

The port which has the most competitive advantage in this whole East Asian region becomes to secure the Premier Port status. If we consider these environment changes, the Premier Port can be defined as follows. First, Premier Port does not only mean the hub in the sub region. But, it also means the hub of the entire East Asian region. In this aspect, 'Premier Port' is similar to 'Hub port'. And some 'Hub Ports' are referred to as Premier Port. However, it is not that all 'Premier Port' necessarily becomes to Hub port. Generally, transshipment port is conceived as Hub port. However, Premier Port can be, or not be transshipment port. Therefore, non Hub port, which has more extensive hinterland than Hub port, and at the same time acts as premier status in a particular region, can be classified as Premier Port. Second, Premier Port does not only act as Hub in the Hub & Spoke system. Hub & Spoke system was originally established under the relationship between the large ships and feeder ships. However, Premier Port system can be established under the relationship between large and large ships, medium and medium ships,

large and medium ships. In Premier Port, the function of relay as well as connection between large and large ships as well as large and small ships are simultaneously implemented. Third, Premier Port is the most representative port of East Asian region, which has container throughput more than 20 million TEU. In this aspect, Premier Port means basically 'Mega Port' which handles more than 20m TEU. Premier Port can be depicted as the following <Figure 1>. In the left side of this figure, Hub port is formulated in a sub-region. One hub port and four feeder ports are inter-related. In the light hand of the figure, Premier Port is formulated in Integrated Region which covers three sub-regions. Each sub-region has one hub and several feeder ports. Among the 3 hub ports, the most representative hub port becomes Premier Port in integrated region. Premier Port has, basically, extensive hinterland, which was depicted in the figure.

<Figure 1> Comparison of 'Hub Port' and 'Premier Port'



Hub Port in Sub Region Premier Port in Integrated Region

Note : 1) 'FP' means feeder port.
2) 'Sub' means sub region

III. Growth of China's Major Ports

As mentioned in the above, East Asia can be divided into three sub-regions. Hub ports in each region are Busan, Kaohsiung, Shanghai, Hong Kong, and Shenzhen. The primary factors which facilitated the growth of the above ports

as Hub are attributed to the following several factors; 1) frequent services of trunk and feeder routes, and 2) large amount of container throughput. Recently, however, a change is occurring in the composition of these hub patterns. In order to understand the changing patterns, the following tables need to be reviewed.

<Table 1> Container throughput in Northeast region ports of East Asia(1,000TEU)

Port	Qingdao (A)	Tianjin (B)	Dailian (C)	Sum(D=A+B+C)	Busan (E)	D-E
1998	1,214	1,018	475	2707	5,946	-3,239
1999	1,540	1,302	740	3582	6,440	-2,858
2000	2,120	1,708	1,011	4839	7,540	-2,701
2001	2,640	2,010	1,209	5859	8,073	-2,214
2002	3,410	2,410	1,352	7172	9,453	-2,281
2003	4,239	3,015	1,670	8924	10,408	-1,484
2004	5,140	3,814	2,211	11165	11,492	-327
2005	6,307	4,801	2,655	13763	11,843	1,920
2006	7,702	5,950	3,212	16864	12,030	4,834
2007	9,462	7,103	3,813	20378	13,270	7,108
2008	10,320	8,500	4,503	23323	13,452	9,871
2009	10,260	8,700	4,552	23512	11,955	11,557
2010	12,012	10,080	5,242	27334	14,157	13,177

Source : Containerization International, CI online.

<Table 2> Container throughput in Middle region ports of East Asia(1,000TEU)

Port	Shanghai (A)	Ningbo (B)	Kaohsiung (C)	A-B	A-C
1997	2,520	257	5,693	2,263	-3,173
1998	3,066	350	6,271	2,716	-3,205
1999	4,216	600	6,985	3,616	-2,769
2000	5,613	902	7,426	4,711	-1,813
2001	6,340	1,210	7,541	5,130	-1,201
2002	8,610	1,860	8,493	6,750	117
2003	11,283	2,772	8,840	8,511	2,443
2004	14,577	4,006	9,714	10,571	4,863
2005	18,084	5,208	9,471	12,876	8,613
2006	21,710	7,068	9,775	14,642	11,935
2007	26,150	9,360	10,257	16,790	15,893
2008	27,980	11,226	9,677	16,754	18,303
2009	25,002	10,503	8,581	14,499	16,421
2010	29,069	13,144	9,181	15,925	19,888

Source : Containerization International, CI online.

<Table 3> Container throughput in Southern region ports of East Asia(1,000TEU)

Port	Shenzhen (A)	Guangzhou (B)	sum(C=A+B)	HK(D)	D-C
1997	1,148	680	1,828	14,567	-12,739
1998	1,952	847	2,799	14,582	-11,783
1999	2,986	1,180	4,166	16,211	-12,045
2000	3,994	1,430	5,424	18,100	-12,676
2001	5,076	1,730	6,806	17,900	-11,094
2002	7,614	2,180	9,794	19,144	-9,350
2003	10,615	2,762	13,377	20,449	-7,072
2004	13,656	3,304	16,960	21,984	-5,024
2005	16,197	4,685	20,882	22,602	-1,720
2006	18,469	6,600	25,069	23,539	1,530
2007	21,099	9,200	32,099	23,998	6,301
2008	21,414	11,001	32,415	24,494	4,931
2009	18,250	11,190	29,440	21,040	8,400
2010	22,510	12,550	35,060	23,532	11,528

Note : The Port of Shenzhen includes the port of Yantian, Shekou, Chiwan, Ma Wan, Dongjiaotou, and the Port of Guangzhou includes the port of Juhai, Nansha, Huangpu, Neigang, and Sinsia.
Source : Containerization International, CI online.

First, the rank in the container handling volume is likely to change or be changed. In the Northeast sub-region, the port of Busan is showing up in container traffic. However, the rapid growth of the port of Qingdao and other China's ports is more conspicuous rather than Busan. If current trend continues, the port of Busan is likely to be surpassed by Qingdao within the next 2-3 years. Meanwhile, in the Middle sub-region, the throughput gap between the ports of Shanghai, and Kaohsiung & Ningbo has been enlarged gradually excluding 2009 and 2010. The port of Ningbo, adjacent to Shanghai, is also behind Shanghai more than before. In the Southern sub-region, traffic gap between the port of Shenzhen & Guangzhou and Hong Kong has been gradually reduced. Thus, the past leading role of the nearby countries' major ports with China is likely to be weakened. Currently, the progressive policy toward the leading role of the Chinese ports is a quite clear, in the midst of the entire growth tendency.

Second, the number of direct calls by liners for North America and Europe from Asia has also facilitated also caused the change. The number of direct

calls by large container ships to Chinese ports has been increased. The details are listed in the following table. Within a decade of the 2000s, the number of ocean routes in major three ports of Northern China increased from 23 to 48. In the port of Shanghai, it was increased from 23 to 69. In the southern sub region of Guangzhou and Shenzhen, it was increased from 29 to 92. However, the tendency of direct calls in the ports of Busan, Hong Kong and Kaohsiung is completely different from that of China's Ports. In the port of Busan, it was increased from 35 to 40. Rate of growth is, however, very low compared with the three ports of Northern China. In the port of Kaohsiung, it was, conversely, decreased from 42 to 29. In the port of Hong Kong, it was also decreased from 70 to 60. These changes in direct calls by large container ships can be described as the followings; In the Northeast sub region, the number of direct calls by large container ships to China's three major ports has already surpassed Busan. In the Middle sub region of Shanghai, the number of direct calls is steadily increasing. In the Southern sub region, direct calls to the port of Hong Kong were already followed by Chinese ports of Shenzhen and Guangzhou.

<Table 4> Frequency of trunk lines for North America and Europe

region	Ports	2000	2005	2010
Northeast	Busan	35	48	40
	Qingdao	12	20	25
	Xingang	7	10	14
	Dalian	4	7	9
Middle	Shanghai	23	62	69
	Kaohsiung	42	41	29
	Ningbo	5	37	50
Southern	Hong Kong	71	90	60
	Shenzhen	29	90	92
	Guangzhou			5

Note : Port of Shenzhen includes the port of Shekou, Yantian, Chiwan, and Da Chang Bay. Port of Guangzhou includes the port of Nansha, and Sinsia.
Source : Ocean Commerce Ltd(2010, 2000, 2005)

As described in the above, the growth of Chinese ports is noticeable. By the way, it can be evaluated that the growth of successful under the strategy to

develop them as East Asia's Premier Port. Therefore, in this meaning, it can be said that China has already started to construct the Premier Port in East Asian region from the past decade.

IV. Current Premier Port Competition in East Asian Region

As analyzed in the above, leading role of the China's major ports has been expanded vigorously. Then, how the China's major ports in each region have established the leading position in such a short periods? Many people say that, it is due to the high growth of the Chinese economy and rapid development of China's ports. However, beside them, the Chinese port policy to construct Premier Port in East Asia need to be referred. To become the Premier Port, China's major ports had concentrated their all energies to construct an independent port system through the development of deep sea terminals. The goal of the Chinese port policy can be verified in the construction of the independent port system, which doesn't rely on nearby foreign ports. The policy toward Premier Port status is well illustrated in many aspects, for example, finance, technology, know-how, marketing, and etc. In the past, almost all of these were dependent on the foreign sector. Increasingly, however, they were sourced from inside of China. The details are as following.

First, port investment fund became to be financed through Chinese & Hong Kong capital market. In the past, fund for the expansion of the port facilities was not sufficient. Due to the lack of fund, China was eager to attract foreign capital. For attracting foreign investment, the Chinese Government pronounced a law to grant terminal operating rights, tax cuts and various tax benefits since 1985.[10] Through the inflow of foreign capital, China could expand port facilities rapidly. And in the middle of 2000s, China carried out the privatization of the port through public offering of the port companies. The following table illustrates some examples of it. Through this process,

10) Provisional Regulations Concerning Preferential Treatment for Port and Terminal Development Projects Financed By Chinese and Foreign Joint Ventures(Sep. 1985).

China today secured investment fund from Chinese capital market which could not be afforded in the past.

<Table 5> Current status of IPO of China's major ports

Company	stock exchange and date
SIPG	listed on Shanghai in October 2006
Shenzhen Chiwan Wharf Holdings Ltd	listed on Shenzhen in 1993
Ningbo Port Co.	listed on Shanghai in September 2010
Tianjin Port Development Holdings Ltd	listed on Hong Kong in May 2006
Xiamen International Port	listed on Hong Kong in November 2005
Shenzhen Yantian Port Ltd	listed on Shenzhen in 1997
Tangshan Port Group Co. Ltd	listed on Shanghai in June 2010
Dalian Port Company	listed on Hong Kong in 2006
Jiangsu Lianyungang Port Co. Ltd	listed on Shanghai in 2010

Source : by author's investigation

Second is Chinese construction technology. This includes the technology of the construction of port infrastructure, design and production of cargo handling equipments. Deep sea port of Shanghai Yangshan was constructed by China's own technology. Today, Chinese manufacturers have almost monopolistic power in world port equipments industry. Furthermore, SIPG showed the outstanding technology which provides the pilot service of visibility using RFID in international logistics in 2009. In the aspect of supply chain security, Chinese X-ray equipment has world's largest market share. Therefore, it is evaluated that China has already acquired a world-class of port technology.

Third is port operating know-how. In the early stage of port operations, China was lack of know-how to operate it efficiently. Thus some Global Terminal Operators were attracted to overcome this problem, and many joint ventures were established. This experience made China's port operators to grow as experts. Based on the knowledge and confidence gained from the process, China's Port Authorities carried out the privatization of the port company which was suggested in the <Table 5>. Thus, the old 49% constraint on foreign investment was already eliminated. This is the testimony of the

confidence they have acquired so far.

Fourth, China gained marketing skill and a brand. The scale of China's ports already ranked high positions among the global top 10, in which six ports were occupied in 2010.[11] Based on this confidence, China's ports became to acquire a global brand. Shanghai's SIPG already entered into the port of Zeebrugge in Belgium in 2010, which terminal was opened in May 2006 by APM Terminals. Currently, SIPG engaged in the business of more than 30 shipping companies around the Yangtze River, and established many joint ventures in the field of port and logistics businesses.[12]

Through the process, China's ports have been reduced the dependence on the nearby foreign ports. Although China solved the problem of the lack of the port facilities, port development is expected to be continued in the future. This may be for the attraction of large container ship directly to their ports.

However, the above Chinese port strategy for securing the Premier Port status means significant threat to nearby foreign countries' major ports of Busan, Hong Kong, and Kaohsiung. Thus, various strategies, which aimed to cope with the threat were formulated and practiced recently. Detailed analysis is as follows.

Case 1. The Port of Busan

The Korean Government is responding with the following six strategies against the Chinese progressive port policy. First, the Korean Government expanded the port facilities of the Busan. As the result of this, Busan New Port was developed besides the old North Port. Cargo-handling capacity was also enlarged. Standard capacity of Busan port amounts to 13.76m TEU, which is similar to the performance of 14.16m TEU in 2010. But, the actual capacity, generally, exceeds standard capacity by 30-50 percent. Terminal operators are always trying to handle maximum volumes as much as possible.

Second, the Korean Government has expanded Port Hinterland. Since early 2000s, Korea set up Port Hinterland Development Master Plan, and eight places across the country were planned to be developed as Port Hinterland.[13]

11) The port of Shanghai marked the first, Shenzhen 4th, Ningbo 6th, Guangzhou 7th, and Tianjin 8th.

12) SIPG owns 20% stakes of Jiangyin Sunan International Container Terminal and five percent stakes in Chongqing Jihai Shipping Company.

13) The first Port Hinterland Master Plan was made by MOMAF(Ministry of Marine Affairs and fisheries) in 2002.

Busan Port Hinterland is the largest of them. In Busan, there are 6 Port Hinterlands. Total space is 1,204,000㎡ now. And another 2,486,000㎡ is expected to be constructed be added by 2013.

Third, Port Hinterland is designated as a Free Trade Zone. FTZ is originally special areas for the attraction of foreign investment, promotion of export & import, manufacturing and logistics activities. The company moved into FTZ is provided duty reserve and rebates, and incentives such as tax exemption. Especially additional income tax and property tax exemption is granted to foreign-invested companies.[14] Currently, one Airport Hinterland and four Port Hinterlands were designated as FTZ. Among them, the largest FTZ is located in the port of Busan. Since 2002, 9,452,000㎡ was designated as FTZ only in the port of Busan.

Fourth, Busan Port Authority began to attract global logistics companies to Port Hinterland. In Busan Newport Hinterland, already thirty global logistics companies were attracted until December 2010. These companies create import/export cargoes, which are expected to activate the port.

Fifth, FTZ system was amended to facilitate the creation of container volumes in 2009. Originally only logistics business was afforded in port Free Trade Zone. However, this system was amended in 2009. As a result of this, manufacturing business was also available in port Free Trade Zone together with logistics business.

Sixth, incentive in port rates was provided. The following rate incentives are provided. One is a 30% reduction of wharfage for export cargoes and 100% wharfage exemption for transshipment cargoes. The other is reduction of container handling rate. This rate, in the port of Busan, was lowered to around 40% in 2010 compared with the past 3-4 years. This level is conceived to be much lower than the real cost. Excessive port facilities, and excessive terminal operators are the primary reasons of the serious rate reduction. The rate is evaluated to be much lower internationally; 30% of Japanese ports, 80% of the Shanghai port, 40% of Hong Kong port, a mere 25% of U.S. ports.[15]

Finally, the volume incentive scheme was provided since the early 2005.

14) The following incentives are provided to the foreign investment companies additionally; 1) reduction of rents, 2) reduction of tax(exemption of VAT, exemption of income tax for 3+2 years and property tax for 15 years).

15) Gil(2011).

This incentive is provided to shipping companies and shippers who transport more container traffic than the previous year. With the above strategies, the port of Busan is now trying to become transshipment center and achieve to the Premier Port status beyond mere Hub port in East Asia.

Case 2. The Port of Hong Kong

The port of Hong Kong responded to the challenge with the following several strategies. First, the Hong Kong Government set up 'Focus Group' which is composed of the opinion leaders from the maritime, logistics, and infrastructure industry for the purpose of recommending necessary strategies for the development of the port of Hong Kong. Since 2005, container throughput of the port of Hong Kong was left behind Singapore. Thus, the Hong Kong Government conceived it indispensible to find methods to strengthen port competitiveness. This was the reason for the government to set up 'Focus Group' in 2006. The Focus Group recommended three Strategies and 27 Proposed Actions which Hong Kong should be practiced.[16] The Hong Kong Government, after receiving the recommendation, carried out them. One of them was the revision of 'The Shipping and Port Control Regulation Ordinance' in February 2006. Through the revision, Hong Kong lowered the registry fee for the Hong Kong registered ship for 5%, and reduced the ship's fuel costs and port facilities due 5% for ocean-going vessel. In 2007, Hong Kong simplified the license system for the ship transported from and to the Pearl River Delta and reduced the fee 50%.

Second, Hong Kong has endeavored to lower the cost of trucking service connecting mainland China and Hong Kong. The primary factor which hindered the competitiveness of logistics industry of Hong Kong from the early 1990s was pointed out the 4-up-4-down regulation.[17] This regulation made the cross-border drayage operations inefficient and high cost. 4-up-4-down regulation was improved to 2-up-2-down in January 2005. As a result of the improvement, road freight rate was reduced to almost 40%.[18]

16) Focus Group(2007).

17) Raymond et al.(2008), pp. 217-234.

18) Before the deregulation, license fee for the cross-border truck was 6,000HK$ per month. Guangdong Authority gave the license only to China-Hong Kong Joint Venture. This Joint Venture leased the license to Hong Kong trucker, the level of the fee was 300HK$ per trip. Hong Kong truck provided the service 1.2 trip per one day.

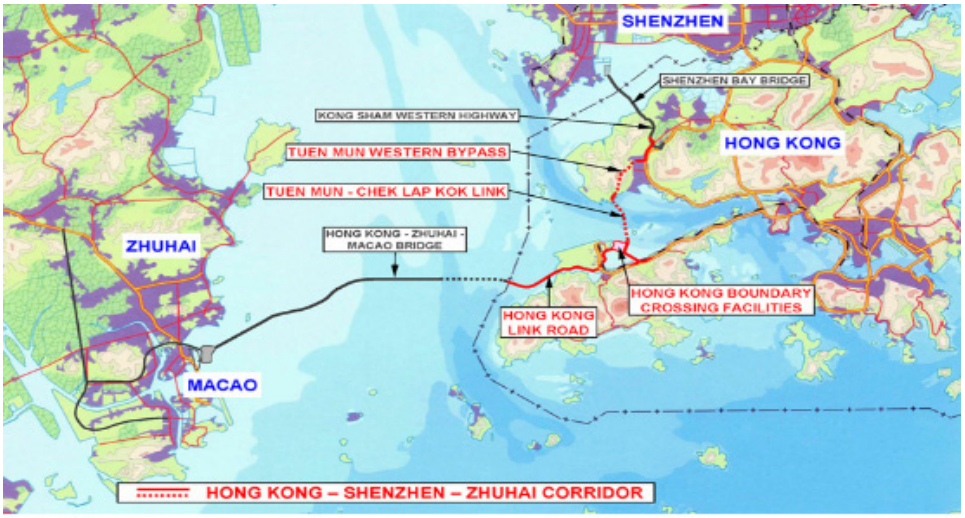
Third, Hong Kong is planning to construct the road links with mainland China. Hong Kong was always trying to find ways for the Chinese cargoes and passengers transport and move through cross-border efficiently. The proposed measure was the road link strategy with mainland China. To achieve this goal and for the purpose of strengthening the transportation network, the Hong Kong Government announced "Ten Major Infrastructure Projects" in October 2007.[19] In this project, Hong Kong~Shenzhen~Zhuhai Corridor construction project is included. This big project is composed of the following several projects. One is construction of Hong Kong~Zhuhai~Macao Bridge(HZMB), Hong Kong Link Road(HKLR), and Hong Kong Boundary Crossing Facilities(HKBCF). The other is construction of Tuen Mun~Chek Lap Kok Link(TM-CLKL), and Tuen Mun Western Bypass(TMWB). HZMB project which leads to a total of 50km started in December 2009, and is scheduled to be completed in 2015-2016. HKLR project of 12km the purpose of which is to connect HZMB and HKBCF, is expected to be launched in the mid-2011 and completed in 2015-2016. TM~CLKL road construction began in 2010 and is expected to be completed in 2016. Construction of TMWB is currently under the environmental impact assessment stage. TM~CLKL and TMWB, after completion, will be connected with Shenzhen Bay Bridge and Kong Sham Western Highway.

Fourth, Hong Kong planned to construct Hong Kong Boundary Crossing Facilities (HKBCF) in 2009. HKBCF is necessary for the efficient pass and clearance of the cargoes, and quarantine of passengers from mainland China to Hong Kong, especially using Hong Kong~Zhuhai~Macao Bridge. This project is also included in the above TM-CLKL project. For this project, around 172.38ha near the Hong Kong International Airport is destined to be filled. Construction work was already started in August 2010, and is expected to be completed in 2016.[20]

19) 10 major infrastructure projects are composed of following three field; 1) transportation infrastructure, 2) cross-boundary infrastructure, and 3) new urban development. see The HKSAR(2007)

20) http://www.info.gov.hk/gia/general/200908/21/P200908200153.htm.

<Figure 2> Hong Kong-Shenzhen-Zhuhai Corridor



source : http://www.hyd.gov.hk/hszc/hszc.htm

If this road completed, it will connect Shenzhen Bay Bridge and Kong Sham Western Highway respectively. Then, Hong Kong and Southern China is destined to be connected with one ring road surrounding the Pearl River Delta. With the above strategies, Hong Kong is constructing the logistics system between Hong Kong and mainland China more speedy and cheap.

Case 3. The Port of Kaohsiung

The port of Kaohsiung also developed various strategies in order to avoid loss of the competitive advantage from the Premier Port competition. These strategies are mainly promoted by the Taiwan Government. The main contents of which are as follows.

First, Global Logistics Center (GLC) project is one of them. This was carried out since 2002 to develop the Taiwan into a Global Logistics Center. To achieve the target, nineteen Intelligent Type Industrial Park were set up by 2007. Additionally, the function of Export Processing Zone which was originally designed for only manufacturing companies, was converted into Integrated Zone, where warehouses and distribution centers simultaneously can be established. Since 2001, eleven GLC were developed.

Second, Taiwan expanded Free Trade Zone into port areas. To achieve this,

Taiwan Government enacted an 'Act for the Establishment and Management of Free Trade Zone' in 2003. After that, five FTZs were designated in 2007, in which Taoyuan Air Cargo Park, Keelung Port, Taipei Port, Taichung Port, and Kaohsiung Port were included. Thus, four major ports were all designated as FTZ. Accordingly, port FTZ became to have comparative advantage, through which 145 logistics companies, and foreign investment of 59.9 billion NTD were attracted by 2008.[21)]

Third, the direct calls issue cross-Taiwan Strait between China and Taiwan was negotiated and solved finally in December 2008, and the scope of ports which is accessible by two countries national ships were expanded continuously. It is expected that this action will facilitate the transfer of transshipment container more than one million TEU to the port of Taiwan from Hong Kong. The port of Kaohsiung and Taipei are expected to enhance their competitiveness by this action.

V. Prospect of Premier Port Competition in East Asia

Then, which port among the mega ports in East Asian region can be Premier Port? Before analyzing this, it is indispensible to evaluate many candidate ports, and select one. As assessment criteria for evaluating the ports which can be Premier Port, it is desirable to select the following several factors. The first is geographical advantage. This factor means that accessibility from both the sea and the land. With respect to the sea, it means the excellent location from the trunk route. Similarly, proximity with industrial and logistics parks in hinterland is also important. Second is the scale of the container volumes. This factor is related with the economic activities of the hinterland. Premier Port has essentially more extensive hinterland than Hub port. Areas over a range of radius at least 2,000km from the port is needed. Third is cost advantage. Fourth is the country's national port policy. This factor is related with the partnerships with nearby ports, which means that competitive and cooperative relationship with nearby ports is needed. This

21) Yang(2009), pp.465-466.

factor is indispensible for the prevention of the obstacle of growth from the nearby ports. Generally, neighboring port acts as a constraint for the growth of each other's port. Consequently, it is important to make partnership relation between the neighboring ports for the prevention of excessive competition.

With the above assessment criteria, evaluation process can be implemented. At first, Chinese ports strategy can be evaluated as follows. First, Chinese ports have, essentially, geographical advantage. Most Chinese ports are located in the trunk routes and they also have a large hinterland. Especially, the port of Shanghai has huge hinterland to the 3,000km from the Yangtze River mouth. Second, the container volumes are more than any other neighboring countries ports. Of course, this is due to the sustained Chinese economic growth. The efficient network linking to the hinterland is also contributing factor. Third, cost advantage has, also, been secured. China's wages are much lower than that of advanced economies of neighbor countries, and China maintains comparatively good labor relations. Fourth, China's major ports maintain strategic partnership with the neighboring ports within China. These factors, all together, prevent the outflow of Chinese container cargoes to nearby countries ports with China. And, these favorable factors accelerate their ports to grow as Premier Port. Furthermore, important thing in addition to the above is that China's policy to expand their port facilities in near future will be continued without break.

Next the strategy of Busan port can be evaluated as follows. First, Busan port is confronted with Japanese Hub Port Strategy. Japanese Port Authority adopted 'Super Hub Port Construction Policy' in 2003, and 'Strategy Port Policy' in 2009. The aim of these policies lies in the prevention of the leakage of Japanese cargoes to the port of Busan, through the construction of international Hub ports in Japan. Second, the port of Busan faced also with the continued port expansion from Northern China. Ongoing port expansion in Northern Chinese ports means profound threat for the future growth of the Busan port. Third, the Korean Government still maintains decentralization rather than concentration policy. Two ports system into Busan and Gwangyang ports is still effective in Korea. Due to the above factors, port

environment in Busan is being deteriorated for the attraction of the Japan and China's cargoes as transshipment. These factors are not favorable for the port of Busan to develop toward Premier Port.

The strategy of Kaohsiung port can be evaluated as follows. Taiwan is pursuing a policy which is opposite direction against the global tendency. Taiwan is now developing a New Port of Taipei instead the expansion of Kaohsiung. The port of Taipei is being developed for the purpose of replacing the port of Keelung. In addition, Fujian Province in mainland China and the direct calls cross-Taiwan Strait is also backbone of the development of Taipei port. However, whatever the purpose of the development of the Taipei port is, there is no doubt, it can mitigate the concentration of container ships to Kaohsiung. The port of Taipei is being developed by a consortium of the three Taiwan's shipping companies; Evergreen, Wanhai, and YangMing. Taipei Port Container Terminal Corporation(TPCTC), the consortium, plans to invest 20 billion NTD, and uses the terminal for 50 years. Two berths were already opened in 2009, and seven berths are expected to be operated by 2014. Taipei port was developed on the BOT basis, and an annual guaranteed volume per berth is 250,000 TEU. Therefore, three Taiwan's shipping companies will transfer their containers from Kaohsiung to Taipei for fulfilling the guaranteed quantities. Accordingly, the development and operation of the port of Taipei intentionally facilitates inter-port competition within Taiwan more intensively. This will hinder the competitiveness of the port of Kaohsiung and development toward Premier Port.

Next is the evaluation on the strategy of Hong Kong port. First, Hong Kong port has competitive weakness in cost advantage compared with Chinese ports. This is not favorable for the port of Hong Kong to grow as Premier Port. Second, Hong Kong's port operators already have been expanded their businesses into Southern Chinese ports during the past 2 decades. Through the process, port of Hong Kong has secured strong partnership with Chinese ports, and thus can be evaluated as successful in establishing win-win relationship with Chinese ports.

The above discrete evaluation on the neighboring countries' ports strategies

excluding China toward Premier Port can be summarized as follows: First, they have similar geographical advantages to Chinese ports from the sea. However, accessibility to the hinterland is much behind than China. The 'Hinterland' here, means not only each countries industrial parks but also Chinese industrial parks. Second, container volumes are far less than China, due to the transition to an advanced economy. Furthermore, networking to the West China is not also efficient compared with China's ports. Third, neighboring countries' ports with China are not favorable in cost advantage, due to the high wages and prices. Fourth, they have disadvantage in terms of national port policy. Especially, Korea and Taiwan are trying to continue decentralization rather than centralization policy. Thus, the possibility for them to lose 'China' hinterland is become to increase. Ultimately, it can be said that the strength of the nearby countries' port with China rests on the know-how, capital, and brand. However, weakness in the high cost and inefficient networking to the 'China hinterland' is more detrimental factors toward Premier Port. Furthermore, these ports are heavily dependent on the transshipment cargoes from China. The ports which depend on the transshipment cargoes have essentially weak structure and high risk. Transshipment cargoes can be secured when the nearby countries with many volumes, but short of facilities. Accordingly, large portion of transshipment cargoes can disappear when the nearby countries start to develop port facilities. By the way, Chinese ports have already developed facilities and handled sufficient volumes. This facilitates the direct calls of large container ships to their ports. For example, the port of Qindao, Tianjin and Dalian in Northern China have more than 26m TEU put together in 2010. Within 2-3 years, it will reach to 30 million TEU. This is a sweet for the large ships to call at Chinese port more frequently. As a result of this, Chinese containers currently transferring to the port of Busan would not be increased so much in near future. To the contrary, the China's major ports have the advantages in the large amounts of container volumes, vast hinterland, and efficient network to the hinterland. This is the very factors for them to develop their ports as Premier status through the construction of independent port system.

As the result of the above analysis, Chinese ports are very likely to become Premier Port in East Asia. The port of Shanghai, among them, has the highest possibility to become Premier Port. The reasons are as follows: First, Shanghai has vast hinterland to the middle and upper Yangtze River and West China. Second, Shanghai constructed already various networks to the hinterland, and always improves it without stop. Third is the cooperation with the Yangtze River ports especially with the port of Ningbo and Taicang. Fourth is the central government's strong support.

VI. Conclusions

From the above analysis, current fierce competition between Chinese ports and neighboring countries' major ports to secure the Premier Port status in East Asian region was confirmed. And the competition will likely be terminated with China's success. Therefore, neighboring countries' ports with China need respond to that. Then, what strategy is needed for them? Lastly, some strategies which need to be carried out by them are to be suggested.

First, it is necessary for them to deliberate some measures for preventing outflow of import and export containers to China's ports. The Premier Ports can attract transshipment containers from nearby ports. Furthermore, there is a possibility that Hub and Spoke system can be built around the China's main ports. For example, some containers in west coast ports of Korea are already imported and exported via the port of Shanghai. This means that Shanghai became the Hub, and west coast ports of Korea became the spoke. Therefore, it is indispensible for Korean ports to cope with this possibility.

Second is the construction of cooperative relationship with Chinese ports. Neighboring countries' ports and terminal operators with China have capabilities in the aspect of finance, operational know-how, and man power. Until now, they pursued aggressive policy rather than cooperation. Pursuing only competition policy is not healthy for both of them. Therefore, it is time for both to turn their strategies to construct cooperative relationship rather

than to continue the competitive relationship. At the same time, quantity oriented port strategy also need to be transformed to value oriented strategy. These are more appropriate and desirable for the both to prevent the loss of rare resources, restore the balanced growth, and to secure value added from port activities.*

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